VÍZKUTATÓ VÍZKÉMIA KFT

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WORK ORDÉR #:
39109/B2

MINUTES OF INSPECTION
Mineral Water

SAMPLE:
Description: *CSÁKVÁR*
Sample: *Kossuth u. 58., / after 2nd deferrization and biological manganese removal -*

CUSTOMER:
Name: *Royal Water Hungary Kft.*
Address: *8083 Csákvár, Kossuth u. 58.*

SAMPLING:
Sampling by: *Vizkutató VÍZKÉMIA KFT. Inspection Laboratory*
Sampling, site inspection: *Certified*

Date of sampling: *22.03.2016* Date of sampling: *22.03.2016*

APPENDICES:
page 1 "Applied Inspection Methods"

ASSESSMENT:

Based on the requirements set forth in 1 "Characteristics of acknowledged natural mineral waters" as Appendix 2 of the Order number 74/ 1999. (XII.25.) of the Ministry of Health Care regarding "natural curative factors" the water sample subject to the inspection, "for internal application" (drinking) can be qualified as natural mineral water.

According to the requirements of Appendix 1of the order number 65/2004. (IV.27.) FVM-ESZCSM-GKM regulating "the bottling of natural mineral waters", regarding the chemical components of water samples, the subject water sample is, from the aspect of the inspected elements qualified to be natural mineral water with the indication: "appropriate for low-sodium diet".

Minutes issued: Budapest, 2016.03.24. Imre Szakács - managing director

The Minutes of Inspection refer to the samle(s) as per the description. The identity of the samples and providing that the requirements regarding the process of sampling are met fall in the responsibility of the body taking the samples. The Minutes of Inspection can be copied in whole only.

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WORK ORDER #: **39109/B2**

Description: ***CSÁKVÁR*** Point of sampling: ***Gauge tap***
Kossuth u. 58.
Sample: **after 2nd deferrization and biological manganese removal** -Water discharge [1/min]:
Date of sampling: ***22.03.2016***

WATERINSPECTIONRESULTS

Basic ion	mg/l	mg eé/l	"Thán" %	Anion	mg/l	mg eé/l	"Thán" %
Na^+	6.3	0.30	3.16	NO_3^-	< 1-0	0.00	0.00
K^+	2.1	0.05	0.57	NO_2^-	< 0.02	000	0.00
Li^+	0.02	0.00	0.03	Cl^-	10	0.28	3.05
NH_4^+	0.04	0.00	0.02	Br^-	0.04	0.00	0.01
Ca^{2+}	99	4.94	52.75	I^-	< 0.01	0.00	0.00
Mg^{2+}	49.5	4.07	43.47	F^-	0.07	0.00	0.04
Fe_{solute}	< 0-05	0.00	0.00	SO_4^{2-}	46	0.96	10.36
Mn_{solute}	< 0.02	0.00	0.00	HCO_3^-	488	8.00	86.55
				CO_3^{2-}			
				PO_4^{3-}	< 0.05	0.00	0.00
				S^{2-}	< 0.02	0.00	0.00
total	157.46	9.37	100.00	total	544.11	9.24	100.000

Anions- Basic ions total: 702 mg/l

Free CO_2 solute/on site		-	mg/l	pH $_{on\ site}$ 7.2	pH $_{balanced}$		
Free CO_2 total/informative		-	mg/l	Corrosion index:			
HBO_2		< 0.03	B mg/l	m-alkalinity	8.0		mmol/l
H_2SiO_3		24	mg/l	p-alkalinity			mmol/l
Aluminium	(Al)	-	µg/l	Total hardness	252		CaO mg/l
Antimony	(Sb)	-	µg/l	Carbonate hardness	224		CaO mg/l
Arsenic	(As)	-	µg/l	Non-carb. hardness	28		CaO mg/l
Barium	(Ba)	-	µg/l	Nominal conductivity 20°C $_{on\ site}$	660		µS/cm
Zinc	(Zn)	-	µg/l	Evaporation residue 260°C	450		mg/l
Mercury	(Hg)	-	µg/l	Evaporation residue 180°C	484		mg/l
Cadmium	(Cd)	-	µg/l	Total dissolved minerals	728		mg/l
Chrome	(Cr)	-	µg/l	KOI $_{ps}$	-	0.44	O_2 mg/l
Nickel	(Ni)	-	µg/l	TOC	-		mg/l
Lead	(Pb)	-	µg/l	Phenol index	-		µg/l
Copper	(Cu)	-	µg/l	Dissolved oxygen	-		mg/l
Selenium	(Se)	-	µg/l				
Cyanide		-	µg/l	Temperature $_{on\ site}$	11.9 °C		

Physical characteristics on site: Colourless, transparent.
at rest: Colourless, transparent.

Assessment *[-]* component not inspected
Based on the components inspected, the subject water sample is of moderate mineral content with calcium-magnesium-carbonate character; hard water, the sodium content of which is low.

Szakács Imr

The Inspection Laboratory of **Vízkutató VÍZKÉMIA KFT.**
is an inspection laboratory certified under number **NAT-1-1217/2014** by the Nationally Qualifications Board.

Budapest, 2016.03.24.

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APPLIED INSPECTION METHODS

Component	Inspection Method	Component	Inspection Method
Na^+	MSZ 1484-3:2006 Part 6	NO_3^-	MSZ 1484.13:2009/EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
K^+	MSZ 1484-3:2006 Part 6	NO_2^-	MSZ 1484.13:2009/EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
Li^+	MSZ 1484-3:2006 Part 6	Cl^-	MSZ 1484.13:2009/EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
NH_4^+	MSZ ISO 7150-1:1992	Br^-	US Stand. Meth.: 4500 Br^-/ EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
Ca^{2+}	MSZ 1484-3:2006 Part 6	I^-	MSZ 448-16:1987 (withdrawn)/ MSZ EN ISO 10304-3:1999
Mg^{2+}	MSZ 1484-3:2006 Part 6	F^-	MSZ 448-17:1986 Part 2/ EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
Fe^{3+}	MSZ 1484-3:2006 Part 6 / MSZ EN ISO 15586:2004	SO_4^{2-}	MSZ 448-13:1983 Part 3/ EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
Mn^{2+}	MSZ 1484-3:2006 Part 6 / MSZ EN ISO 15586:2004	HCO_3^-	MSZ 448-11:1986
		CO_3^{2-}	MSZ 448-11:1986
		PO_4^{3-}	MSZ EN ISO 6878:2004 Part 4/ EPA Method 300.1:1999/MSZ EN ISO 10304-1:2009
		S^{2-}	MSZ 448-14:1990 Part 3
Odour, taste	MSZ EN 1622:2007	pH	MSZ 448-22:2009
Colour	MSZ EN ISO 7887:1998 (withdrawn)	m-alkalinity	MSZ 448-11:1986
Free carbonic acid	MSZ 448-23:1983	p-alkalinity	MSZ 448-11:1986
Bond CO_2	MSZ 448-23:1983	Total hardness	MSZ 448-21:1986
TOC	MSZ EN 1484:1998	Carbonate hardness	MSZ 448-21:1986
HBO_2	MSZ 10889-2:1981	Non-carbonate hardness	MSZ 448-21:1986
H_2SiO_3	MSZ 448-26:1991	Nominal el. conductivity	MSZ EN 27888:1998
Cyanide (total)	MSZ 260-30:1992 section 4.1-4.6	KOI_p	MSZ 448-20:1990
Phenol index	MSZ 1484-1:2009	$KOI_{dichromatic}$	ISO 15705:2002
ANA detergent	MSZ 448-49:1981	Evap. res./total diss. mat.	MSZ 448-19:1986
Total phosphor	MSZ EN ISO 6878:2004 Part 7	Suspended-mat. content	MSZ 448-33:1985
Organic sodium	MSZ 448-27:1985 Part 6	Temperature	MSZ 448-2:1967 (withdrawn)
Cr (VI)	MSZ 260-32:1989 Part 2	Active chlorine	MSZ EN ISO 7393-2:2000
UV SZOE $_{cyclohexane}$	MSZ 12750-23:1976 Part 4 (withdrawn)	Ozone	US Standard Methods: 4500-O_3/DIN 38408-G3 Part 2
Dissolved oxygen	MSZ ISO 5813:1992/MSZ EN 25814:1998 (withdrawn)	Chlorite, Chlorate	EPA Method 300.1:1999/MSZ EN ISO 10304-4:2000
Milkiness	MSZ EN ISO 7027:2000	Bromate	EPA Method 300.1:1999/EN ISO 15601:2001
Aluminium	MSZ EN ISO 15586:2004	Chromium	MSZ EN ISO 15586:2004/MSZ 1484-3:2006 Part 6
Antimony	MSZ EN ISO 15586:2004	Molybdenum	MSZ EN ISO 15586:2004
Arsenic	MSZ EN ISO 15586:2004	Nickel	MSZ EN ISO 15586:2004/MSZ 1484-3:2006 Part 6
Barium	MSZ EN ISO 15586:2004	Lead	MSZ EN ISO 15586:2004/MSZ 1484-3:2006 Part 6
Zinc	MSZ 1484-3:2006 Part 6	Tin	MSZ EN ISO 15586:2004
Argent	MSZ EN ISO 15586:2004/ MSZ 1484-3:2006 Part 6	Copper	MSZ EN ISO 15586:2004/ MSZ 1484-3:2006 Part 6
Mercury	MSZ 1484-3:2006 Part 9	Strontium	MSZ EN ISO 15586:2004/ MSZ 1484-3:2006 Part 6
Cadmium	MSZ EN ISO 15586:2004/ MSZ 1484-3:2006 Part 6	Selenium	MSZ EN ISO 15586:2004/
Cobalt	MSZ EN ISO 15586:2004/ MSZ 1484-3:2006 Part 6	Vanadium	MSZ EN ISO 15586:2004/
BTEX / GC-FID, -MS	MSZ 1484-4:1998/ASTM D6520:2000	CH4, O2, N2, CO2	MSZ 448-43:1985
VOCl / GC-EDC, -MS	MSZ 1484-4:1998/ASTM D6520:2000		
Oil index / GC	EPA 8015C/ ASTM D6520:2000	methane, ethane, propane, butane, pentane, hexane	MSZ EN ISO 6974-3:2001

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